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Computer network lab Quiz 1

[1] IP address?

→ IP address or Internet protocol addres is a numerial address assigned to each computer so they can uniquely communicate with each other. It helps data to know where need to be sent, helps in following path. Its a 32 bit number.

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[2] Increased latency / Decreased latency

→ Network latency means routing time taken during transfer of data between two systems. So decreased latency is suitable for systems so less lagging will be taken place and will look like real time data transfer.

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[3] Wireshark and its use

→ Wireshark is a packet sniffer software that keeps track of data transfering from a system
Use → It is used to capture some packets that are transfering either send or received by system. If the data is not properly encoded it can lead to data breach and any malicious activity because packet sniffer shows all detail regarding where data came from

where it was being sent and what content it have in it.

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[6] Client and Server Machines

→ client and server machines are typically computers that are used for data transfer. client usually sends a request to server for data it needs and that data is sent back from server to client that is then showed on client screen. Server is usually a machine that is waiting for client to make a request and then pass that data if acknowledged to client. TCP connections are established to transfer data between client and server.

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[4] Loop Go to end of file

→ EOF (end of file) which is used to determine when there is no more data to be read in a file.

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[7] Socket

→ Socket is a endpoint for sending and receiving data across a computer network.

It uses either TCP or UDP connection to transfer data between so called as either TCP socket or UDP socket. Sockets are identified by IP address and port numbers.

[5] HTTP role in web communication

→ HTTP stands for Hyper Text Transfer Protocol. In web communication it is used to retrive data in form of webpages and their respective contents in it. Commonly it is used for transfering data between client server application where request is generated by client and server gives its response.

[8] Compile file using gcc compiler

→ To compile a file in c with gcc

```
gcc file.c -o objfile_name
```

and to run it

```
./objfile_name
```

[9] Open file in C

→ To open a file in C we use File and fopen function by providing relevant parameters.

Code:

```
File *file;
file = fopen("filename.txt", "r");
fclose(file);   // for closing file
```

[10] fclose in C

→ The purpose of fclose function in C is to close a file that is either opened for reading or writing end. Its important to use it after operation to free up the resources, to flash buffers and to prevent the data from corruption.

Code

```
File * file;
file = fopen("filename", "r");
fclose (file);
```
← closing file

---

[11] compile example.c

→ To compile a file example.c using gcc compile

compile	gcc example.c -o exp
execute	./exp

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[14] OSI Model

there are 5 layers in OSI open system interconnection all are written below:

1- Physical Layer

deals with connection between devices, i.e cables, connectors

2- Data link layer
creating reliable link between two connected nodes deals with framing, flow control and error detection

3- Network Layer
Manages logical addressing, routing and forwarding of data packets between devices on different networks.

4- Transport layer
Ensure end to end communication, reliability and error recovery, it manages flow control and break layer messages into smaller packets.

5- Application layer
Provides network services directly to end users or applications can run various protocols like HTTP, SMTP etc.

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[13] Network Response code
→ one of response code is 200 OK
this response code means that the client request made to server is approved and the relevant data is sent to client.

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[12] Protocol tech wireshark analyze
→ wireshark analyzes and decodes data that is sent

back and forth over a network. It supports wide range of protocols some are

Http : hyper text transfer protocol
SMTP : Simple mail transfer protocol
DNS : Domain Name System
UDP, TCP, IP

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[15]. Commands

→ Top : It gives summary of processes in ~~real~~ real time that are running on a system for analyzation

→ PS : It shows the summary of a specific process running on a system

→ Kill pid : It is used to kill a process running on a system as an example kill -1234 here kill is command and 1234 is pid.

→ chmod : It is used to change the permission of a file for the specific group of users.

→ Host : It is used to get a copy of DNS (Domain Name System) by using

The ip address which helps in extraction of data.

→Ping : it is used to check the latency of a network about the data being transferred over.
